



IPW

Receipt.

PATENT  
ATTORNEY DOCKET NO. 50026/057001

Certificate of Mailing: Date of Deposit: May 25, 2007

I hereby certify under 37 C.F.R. § 1.8(a) that this correspondence is being deposited with the United States Postal Service as **first class mail** with sufficient postage on the date indicated above and is addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Collette R. D'Amico

Printed name of person mailing correspondence

*Collette R. D'Amico*

Signature of person mailing correspondence

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yun YOU et al.

Confirmation No.: 3067

Serial No.: 10/562,408

Art Unit: 1636

Filed: December 07, 2006

Examiner: K.A. Makar

Customer No.: 21559

Title: MINUS STRAND RNA VIRAL VECTORS CARRYING A GENE WITH  
ALTERED HYPERMUTABLE REGIONS (as amended)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST TO CORRECT FILING RECEIPT

Applicants request that the enclosed filing receipt be corrected as follows.

Please correct the title as follows:

“MINUS STRAND RNA VIRUS VECTOR CARRYING GENE MODIFIED IN  
HIGH MUTATION REGION”

to read:

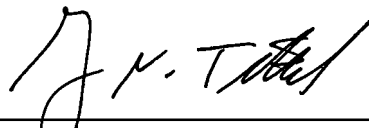
“MINUS STRAND RNA VIRAL VECTORS CARRYING A GENE WITH  
ALTERED HYPERMUTABLE REGIONS”

Enclosed are copies of the incorrect filing receipt indicating the correction to be made, and the Preliminary Amendment, which sets for the correct title, as filed with the National Phase Application on December 23, 2005.

If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: 25 May 2007



James D. DeCamp, Ph.D.  
Reg. No. 43,580

JAN N. TITTEL, Ph.D.  
Reg. No. 52,290

Clark & Elbing LLP  
101 Federal Street  
Boston, MA 02110  
Telephone: 617-428-0200  
Facsimile: 617-428-7045

DE-DOCKETED



UNITED STATES PATENT AND TRADEMARK OFFICE

 UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/562,408	12/07/2006	1645	1590	50026/057001	8	14	4

CONFIRMATION NO. 3067

 21559  
 CLARK & ELBING LLP  
 101 FEDERAL STREET  
 BOSTON, MA 02110

COPY

## FILING RECEIPT



\*OC000000022237345\*

Date Mailed: 02/01/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

 Jun You, Ibaraki, JAPAN;  
 Akihiro Iida, Ibaraki, JAPAN;  
 Mamoru Hasegawa, Ibaraki, JAPAN;

**Power of Attorney:** The patent practitioners associated with Customer Number 21559.

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/JP04/09617 06/30/2004

## Foreign Applications

JAPAN 2003-187312 06/30/2003

If Required, Foreign Filing License Granted: 01/30/2007

 The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/562,408**

Projected Publication Date: 05/10/2007

Non-Publication Request: No

Early Publication Request: No

**Title**

~~Minus strand ma virus vector carrying gene modified in high mutation region.~~  
 Minus strand rna viral vectors carrying a gene with altered hypermutable regions

**Preliminary Class**

435

## PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

---

### LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

#### **NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



# COPY

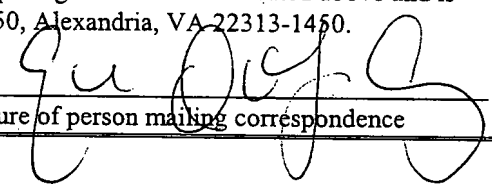
PATENT  
ATTORNEY DOCKET NO. 50026/057001

Certificate of Mailing: EV768764575 US Date of Deposit: December 23, 2005

I hereby certify under 37 C.F.R. § 1.10 that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" with sufficient postage on the date indicated above and is addressed to Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Elvis DeLaCruz

Printed name of person mailing correspondence

  
Signature of person mailing correspondence

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jun YOU et al. Art Unit: Not Yet Assigned

Serial No.: Not Yet Assigned Examiner: Not Yet Assigned

Filed: December 23, 2005 Customer No.: 21559

Title: MINUS STRAND RNA VIRUS VECTOR CARRYING GENE  
MODIFIED IN HIGH MUTATION REGION

Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

### PRELIMINARY AMENDMENT

Prior to examination, kindly amend the application as follows.

Amendments to the specification:

Please note that all page numbers and line numbers herein refer to the concurrently filed English language translation of the Japanese language specification.

Please amend the title of the application as follows.

“MINUS STRAND RNA ~~VIRUS~~ VIRAL VECTOR VECTORS CARRYING A GENE  
~~MODIFIED IN HIGH MUTATION REGION~~ WITH ALTERED HYPERMUTABLE  
REGIONS”

Please insert the following heading and paragraph at page 1, line 5.

Cross-Reference to Related Applications

This application is the U.S. National Stage Application of International Application Number PCT/JP2004/009617, filed June 30, 2004, which, in turn, claims the benefit of Japanese Patent Application Serial Number 2003-187312, filed June 30, 2003.

Please amend page 12, line 34 through page, 13 line 1 as follows:

For example, Sendai virus E sequences include 3'-UNAUUCUUUUU-5' (N is any one of A, G, U, and C) (SEQ ID NO: 59; see Fig. 42), and human parainfluenza virus type 3 (HPIV-3) E sequences include 3'-UWWYWBUUUUU-5' (~~N is any one of A, G, T, and C~~) (~~SEQ ID NO: 60~~), which specifically includes 3'-UUAUUCUUUUU-5' (SEQ

ID NO: 61), 3'-UAUUAGUUUUU-5' (SEQ ID NO: 62), 3'-UAAUAUUUUUU-5' (SEQ ID NO: 63), 3'-UUAUAUUUUUU-5' (SEQ ID NO: 64), and 3'-UAUCUGUUUUU-5' (SEQ ID NO: 65) (Genbank accession X03967, M13886, M13888, and M21649).

Measles virus E sequences include YRAUWHNUUUU (SEQ ID NO: 66), which specifically includes 3'-CAAUAUUUUUU-5' (SEQ ID NO: 67), 3'-UAAUAUUUUUU-5' (SEQ ID NO: 68), 3'-UGAUUUGUUUU-5' (SEQ ID NO: 69), 3'-CAAUAAUUUU-5' (SEQ ID NO: 70), 3'-UAAUUCUUUUU-5' (SEQ ID NO: 71), and 3'-UAAUUUCUUUU-5' (SEQ ID NO: 72) (Genbank accession K01711).

Hendravirus E sequences include 3'-WAAKYUUUUU-5' (SEQ ID NO: 73), which specifically includes 3'-UAAUUCUUUUU-5' (SEQ ID NO: 74) and 3'-

AAAUGUUUUUU-5' (SEQ ID NO: 75). Nipahvirus E sequences include 3'-UAAUUCUUUUU-5' (SEQ ID NO: 76; Genbank accession AF017149 and AF212302).

The E sequence of RSV includes 3'-AWKWWUUUU-5' (SEQ ID NO: 77), which specifically includes 3'-AUUAUAUUUU-5' (SEQ ID NO: 78), 3'-AUUAAAUUUU-5' (SEQ ID NO: 79), 3'-AUUAUUUUUU-5' (SEQ ID NO: 80), 3'-AUGUUUUUUU-5' (SEQ ID NO: 81), 3'-AUUAAUUUUU-5' (SEQ ID NO: 82), 3'-AUGAAUUUUU-5' (SEQ ID NO: 83), 3'-AAUAUAUUUU-5' (SEQ ID NO: 84), 3'-AAUAAAUUUU-5' (SEQ ID NO: 85), and 3'-AAUAAUUUUU-5' (SEQ ID NO: 86) (Genbank accession M74568).

SV5 E sequences include 3'-ARWWUCU<sub>4-7</sub>-5' (SEQ ID NOs: 87, 88, 89, and 90), which specifically includes 3'-AGUAUCU<sub>4-7</sub>-5' (SEQ ID NOs: 91, 92, 93, and 94),



3'-AAAUUCU<sub>4-7</sub>-5' (SEQ ID NOs: 92, 93, 94, and 95), and NDV E sequences include 3'-AWUCUUUUUU-5' (SEQ ID NO: 96) (Kuo L *et al.*, J Virol. 1996, 70(10): 6892-901; Kuo L *et al.*, J Virol. 1996, 70(9): 6143-50).”

Please replace the Sequence Listing found in the English language translation of PCT/JP2004/009617 with the enclosed paper copy of the Sequence Listing provided with the concurrently filed Statement Under 37 C.F.R. §§ 1.821 – 1.825.

## REMARKS


Applicants amend the specification to cross-reference related applications. The title has been amended. In addition, amendments to pages 12-13 have been entered.

These amendments correct errors in the Japanese specification, which are apparent when read in light of the translated English specification. Finally, a replacement Sequence Listing updating fields 110-170 has also been submitted. No new matter has been added by the present amendments.

If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: 23 December 2005



---

James D. DeCamp, Ph.D.  
Reg. No. 43,580

Clark & Elbing LLP  
101 Federal Street  
Boston, MA 02110  
Telephone: 617-428-0200  
Facsimile: 617-428-7045